

REMARKS

Claims 1-14 are pending in this application. The Examiner has rejected claims 1-12 under 35 U.S.C. 103(a), citing to CH 0004141 18, Bernardi, and De Boer. For the reasons described below, applicant respectfully disagrees with the Examiner's position and requests reconsideration and withdrawal of all of the rejections. In addition, the Examiner apparently did not consider claim 13, which was a new claim added in response to the last office action. Applicant respectfully requests that claim 13 be considered.

The Examiner has rejected claims 1, 4-5, 8-10, and 12 under 35 U.S.C. 103(a) as being unpatentable over CH 0004141 18 in view of U.S. Patent No. 3,716,959 to Bernardi. Applicant respectfully disagrees with the Examiner's position and requests reconsideration and withdrawal of this rejection.

The Examiner states that "Bernardi teaches that it is known in the art to provide a beam structure (10) with end plates (36) wherein the endplates (36) along with welds (39, 41, 43) provide a rigid, column 2, lines 50-52, "full moment" connection, column 1, lines 45-51." Applicant respectfully disagrees that Bernardi teaches the endplate as described and claimed in the application.

First, the Bernardi patent does not teach a "full moment" connection. Applicant argued in response to the last Office Action that "full moment" means "rigid" and permits full strength beam assemblies to be constructed by interconnecting end-to-end a plurality of individual beam members. There are a variety of connector types: simple (shear), semi-rigid (partial-moment), and rigid (full-moment). See U.S. Patent No. 5,244,300, col. 1, lines 53-58. The Bernardi patent describes a semi-rigid, or partial-moment

connection between a beam end and a column. In fact, the Bernardi title is “Beam End Construction for Semi-Rigid Connection to a Column.” See also Bernardi, col. 1, lines 38-39; col. 2, lines 28-29, 34, and 36 for instances in which the construction is described as semi-rigid.

Bernardi states that “a semi-rigid connection of the type used in the present invention involves a rigid connection of a portion of the beam ends to the columns while still providing a flexible plate portion adjacent the column to permit elongation under load which is necessary to obtain the desired semi-rigid action. This permits the beam to flex under loading as is desired.” Col. 2, lines 28-35. The present invention, conversely, does not provide a flexible plate portion or permit flexing under load. Instead, the present invention describes a full-moment, rigid connection. The beam of the present invention does not flex or elongate under load.

As the Bernardi invention describes a semi-rigid connection intended to flex and elongate under load, it would not have been obvious to one having ordinary skill in the art to use the end plates of Bernardi with the beam member of CH 000414118 in order to enable adjacent beam structures to be secured together and to provide the beam structure with added stiffness adjacent the ends thereof. While it is may be true that without end plates, a beam is weaker at the ends, the endplates described in Bernardi do not make for a rigid, full-moment connection claimed by Applicant.

In addition, the Bernardi disclosure states that the “only basic limitation on the beams is that they have a generally H-shaped in cross section.” Col. 2, lines 20-22. Applicant’s invention, as claimed, is for an endplate for use with a Z-shaped beam, and not an H-shaped beam. Where the prior art leads away from a particular combination or

modification, this is strong evidence of non-obviousness. See Monarch Knitting Machinery v. Sulzer Morat GmbH, 139 F.3d 877, 882 (Fed. Cir. 1998). In this case, a person looking to make the claimed invention would not combine CH 000414118 with the endplate of Bernardi, as the Bernardi reference specifically states that the endplate is for use only with H-beams, and not with Z-beams.

Regarding claim 12, the Examiner stated that while CH 000414118 does not disclose the use of a pair of beams, it would have been obvious to one having ordinary skill in the art at the time of the invention to add an additional beam. The Examiner has not made out a prima facie case for obviousness, as the Examiner has not provided any prior art that shows beams connected end to end with their end plates in abutting engagement, nor has the Examiner provided any prior art that shows two beams connected end to end wherein the resulting extended length beam member has the same strength as a single member.

Applicant's specification indicates that a problem in the prior art is that the point of interconnection between beam members is typically a weak point and thus requires a separate support post, collars, or overlap of the beams. Page 2, lines 6-10. None of the references cited by the Examiner address a solution to this problem. Applicant respectfully requests that the Examiner provide prior art demonstrating the use of an endplate to make a full moment connection between two beam members. The Bernardi reference does not teach an endplate that strengthens the connection between two beam members. Instead the Bernardi invention describes an endplate used to make a partial moment, or semi-rigid connection between a beam member and a column.

The Examiner has rejected claims 2, 3, and 11 under 35 U.S.C. 103(a) as being unpatentable over CH 0004141 18 in view of Bernardi and De Boer. Applicant incorporates its arguments from above regarding the Bernardi reference. In addition, the De Boer reference does not teach that it is known in the art to form recesses in the inwardly extending legs of flanges of a beam member. The De Boer invention is for a reinforcement plate, and not a beam member with an endplate as claimed by Applicant. Applicant respectfully requests that the Examiner provide prior art showing recesses at the end of a beam member that are designed for the receipt of an endplate.

In addition, there is nothing disclosed in CH000414118 et al., Bernardi, or De Boer that would teach, suggest, or motivate one skilled in the art to modify the references suggested by the Examiner. Based on the foregoing, Applicant respectfully requests that the Examiner withdraw the rejections of claims 2, 3, and 11 under 35 U.S.C. § 103(a).

The Examiner has rejected claims 6 and 7 under 35 U.S.C. 103(a), citing CH 000414118 in view of Bernardi. Again, Applicant incorporates its arguments from above relating to the Bernardi reference.

Applicant respectfully requests that the Examiner review claim 13, which was a new claim added in response to the last office action. The cover sheet indicates that claims 1-11 are rejected, and the Examiner does not address claim 13 at all in the office action.

Applicant has also added new claim 14 and asks that the Examiner consider this new claim.

Accordingly, the purpose of the claimed invention is not taught nor suggested by the cited references, nor is there any suggestion or teaching that would motivate one


skilled in the relevant art to combine the references in a manner that would meet the purpose of the claimed invention. Because the cited references, whether considered alone, or in combination with one another, do not teach nor suggest the purpose of the claimed invention, Applicant respectfully submits that the claimed invention patentably distinguishes over the prior art, including the art cited merely of record.

Based on the foregoing, Applicant respectfully submits that claims 1-14 are in condition for allowance at this time, patentably distinguishing over the cited prior art. Accordingly, reconsideration of the application and passage to allowance are respectfully solicited.

The Examiner is respectfully urged to call the undersigned attorney at (515) 288-2500 to discuss the claims in an effort to reach a mutual agreement with respect to claim limitations in the present application which will be effective to define the patentable subject matter if the present claims are not deemed to be adequate for this purpose.

Respectfully submitted,

Date: 11-15-04


Daniel A. Rosenberg
DAVIS, BROWN, KOEHN,
SHORS & ROBERTS, P.C.
666 Walnut St., Suite 2500
Des Moines, Iowa 50309
Telephone: (515) 288-2500

ATTORNEYS FOR APPLICANT